OBLON, SPIVAK, ET AL
DOCKET #: 249034US6
INV: Izumi URANO, et al.
SHEET 1 OF 19

FIG. 1

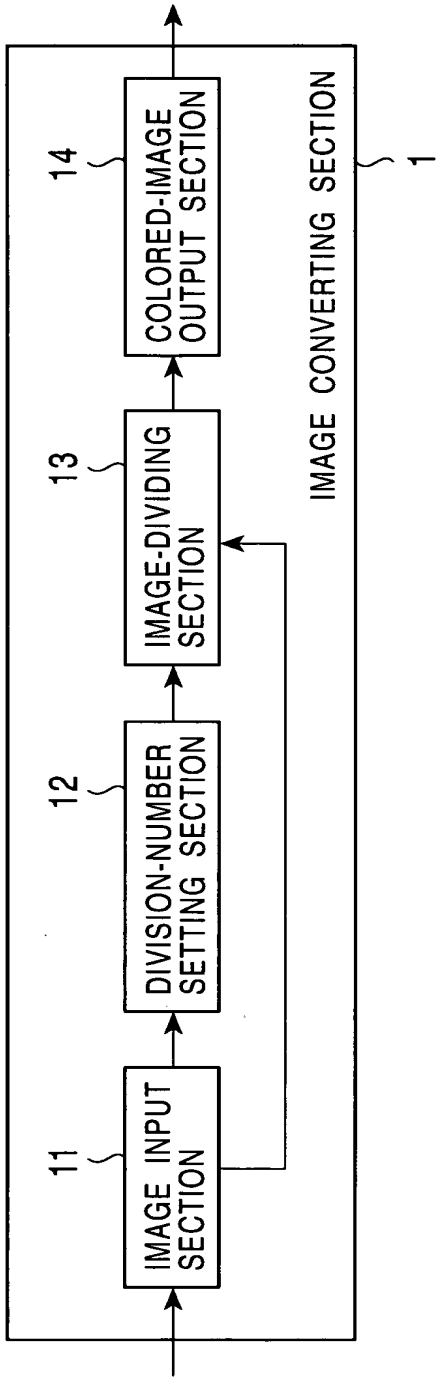


FIG. 2

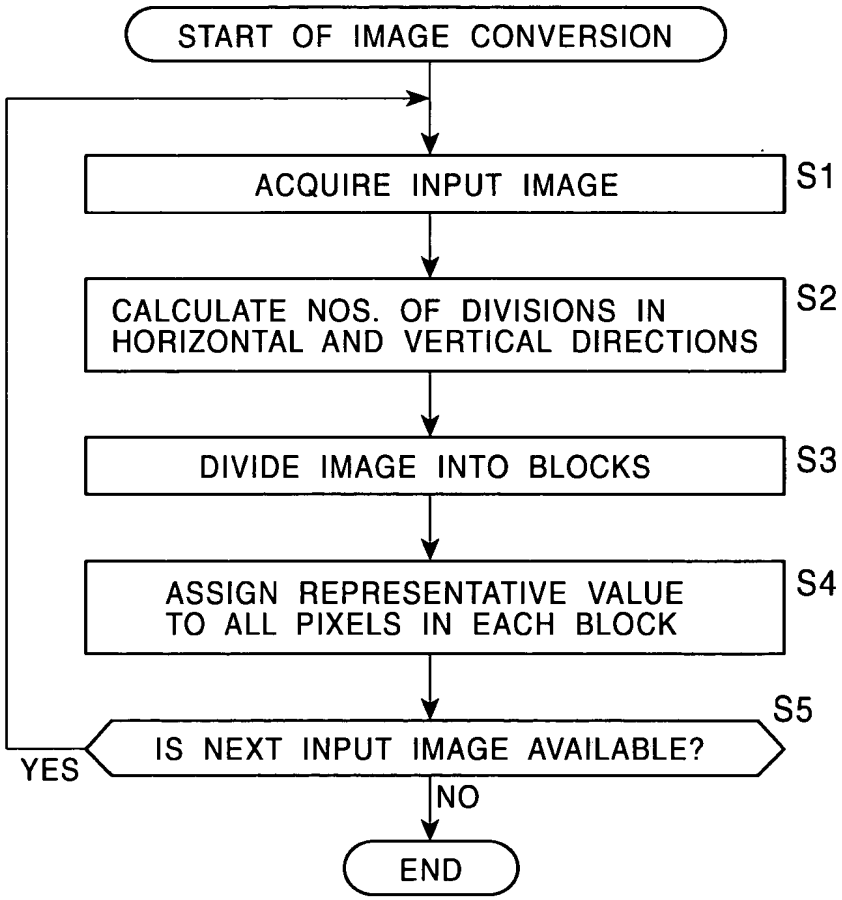

START OF IMAGE CONVERSION
ACQUIRE INPUT IMAGE
S1
CALCULATE NOS. OF DIVISIONS IN HORIZONTAL AND VERTICAL DIRECTIONS
S2
DIVIDE IMAGE INTO BLOCKS
S3
ASSIGN REPRESENTATIVE VALUE TO ALL PIXELS IN EACH BLOCK
S4
S5
IS NEXT INPUT IMAGE AVAILABLE?
YES
NO
END

FIG. 3

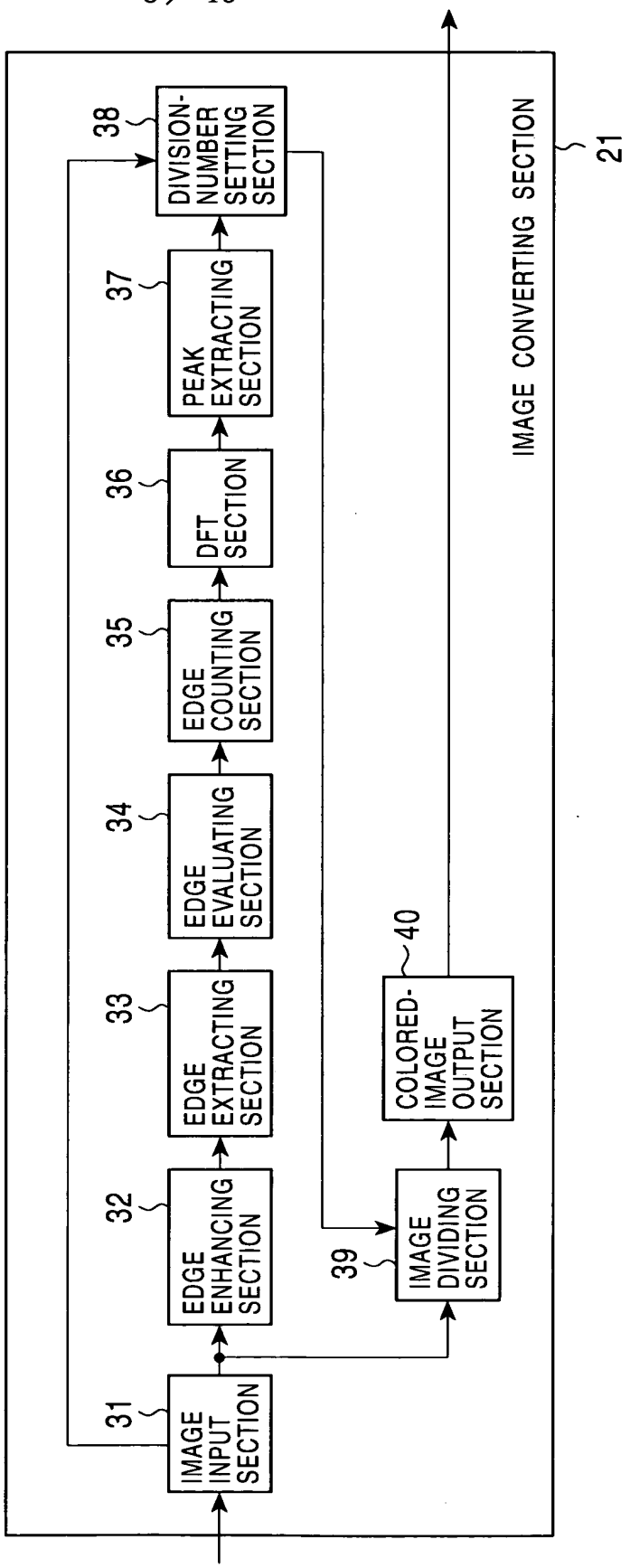


IMAGE CONVERTING SECTION
21
IMAGE INPUT SECTION
31
EDGE ENHANCING SECTION
32
EDGE EXTRACTING SECTION
33
EDGE EVALUATING SECTION
34
EDGE COUNTING SECTION
35
DFT SECTION
36
PEAK EXTRACTING SECTION
37
DIVISION-NUMBER SETTING SECTION
38
IMAGE DIVIDING SECTION
39
COLORED-IMAGE OUTPUT SECTION
40

FIG. 4

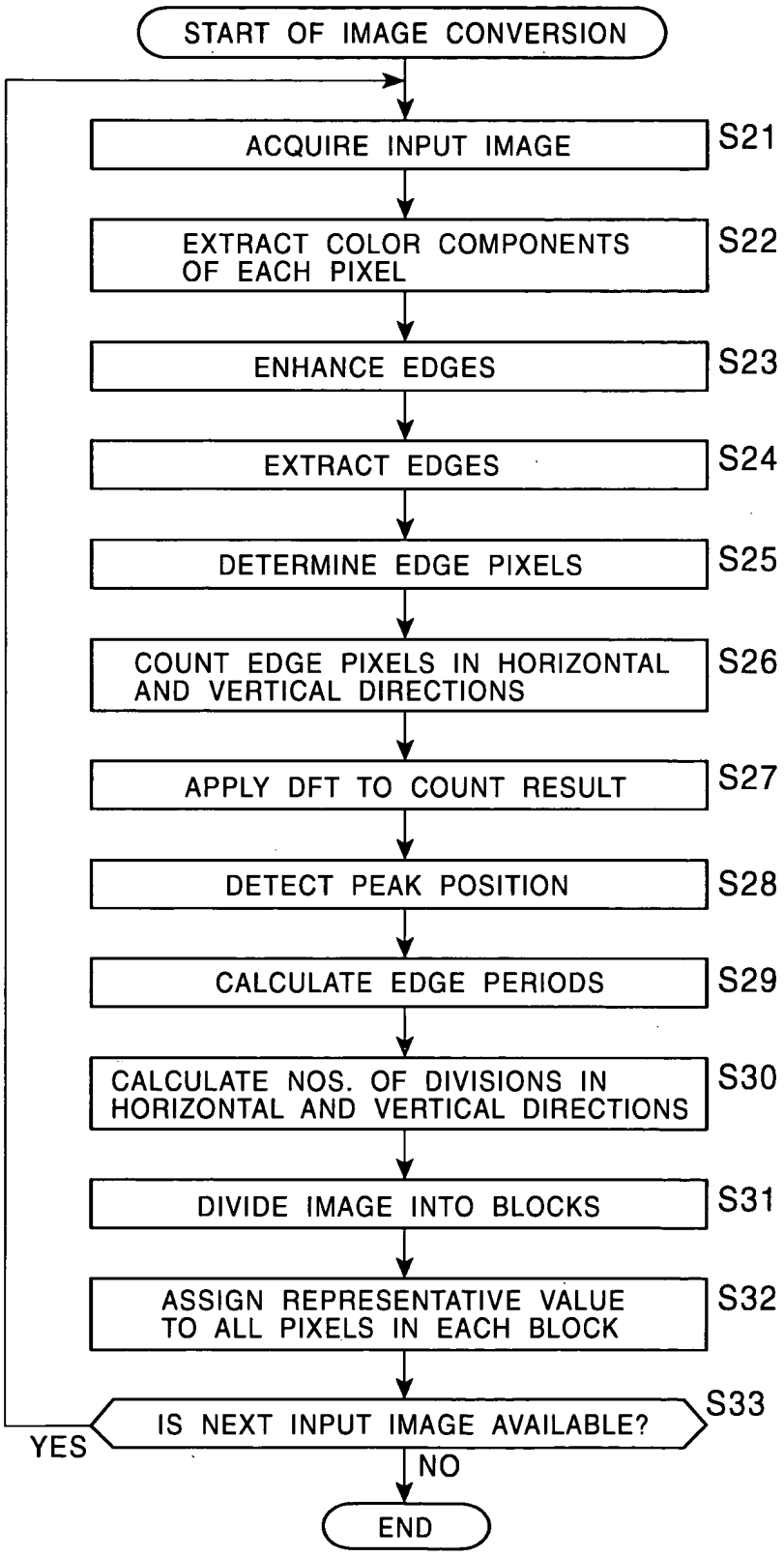

START OF IMAGE CONVERSION
ACQUIRE INPUT IMAGE
S21
EXTRACT COLOR COMPONENTS OF EACH PIXEL
S22
ENHANCE EDGES
S23
EXTRACT EDGES
S24
DETERMINE EDGE PIXELS
S25
COUNT EDGE PIXELS IN HORIZONTAL AND VERTICAL DIRECTIONS
S26
APPLY DFT TO COUNT RESULT
S27
DETECT PEAK POSITION
S28
CALCULATE EDGE PERIODS
S29
CALCULATE NOS. OF DIVISIONS IN HORIZONTAL AND VERTICAL DIRECTIONS
S30
DIVIDE IMAGE INTO BLOCKS
S31
ASSIGN REPRESENTATIVE VALUE TO ALL PIXELS IN EACH BLOCK
S32
IS NEXT INPUT IMAGE AVAILABLE?
S33
YES
NO
END

FIG. 5A

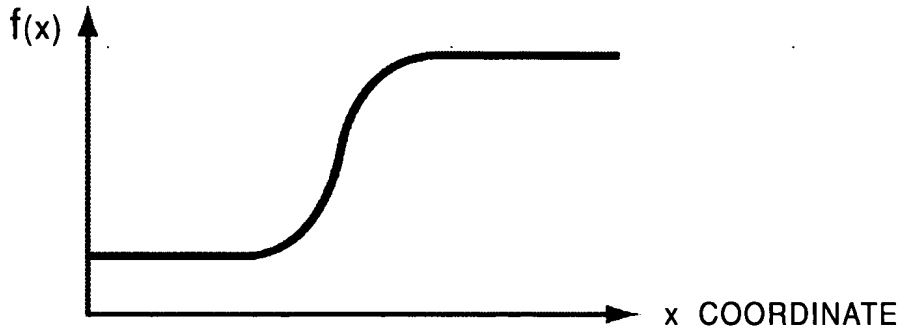


FIG. 5B

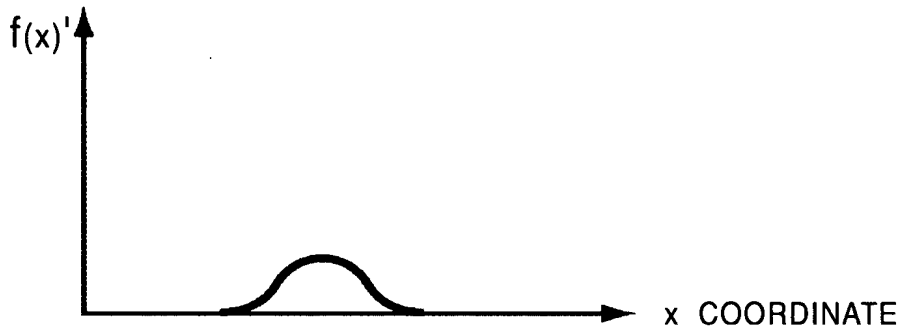


FIG. 5C

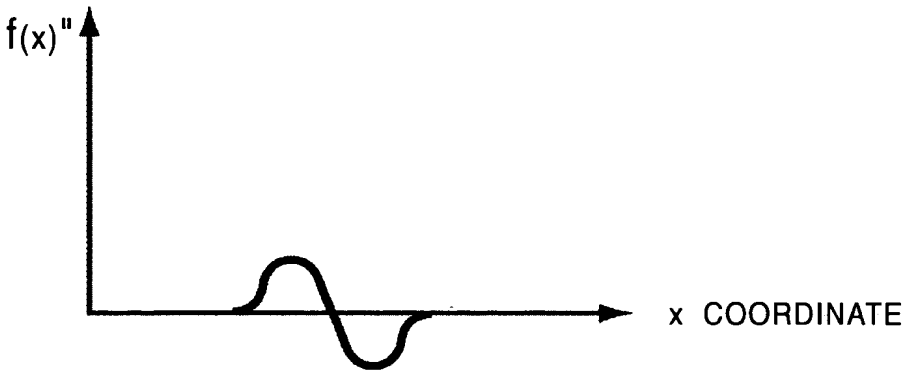


FIG. 5D

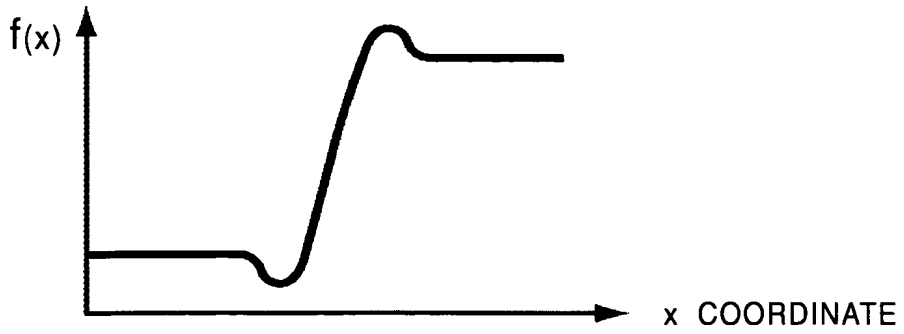


FIG. 6A

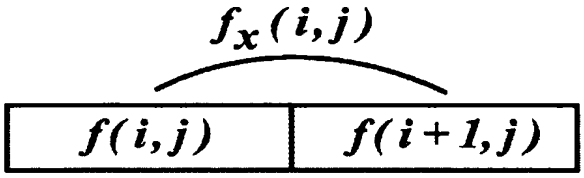


FIG. 6B

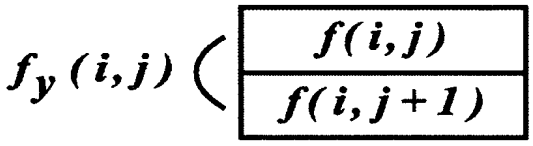


FIG. 6C

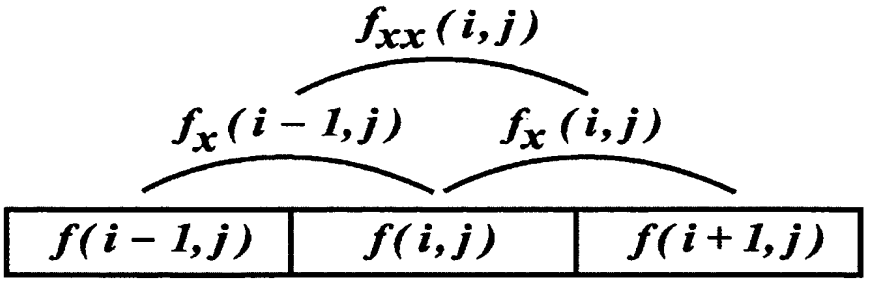


FIG. 6D

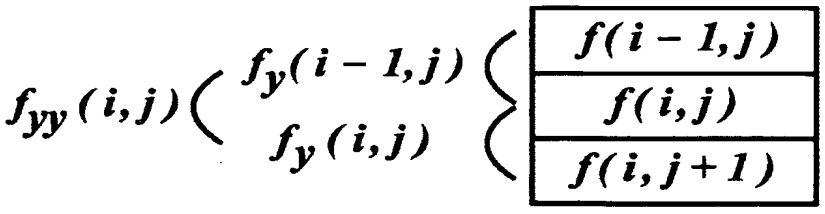


FIG. 7A

0	−1	0
−1	5	−1
0	−1	0

FIG. 7B

−1	−1	−1
−1	9	−1
−1	−1	−1

FIG. 8A

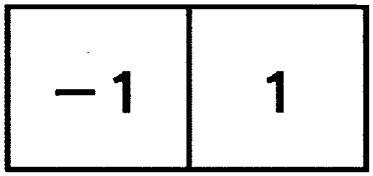


FIG. 8B

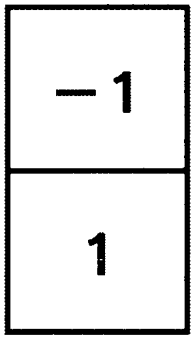


FIG. 9A

0	1
−1	0

FIG. 9B

1	0
0	−1

FIG. 10A

0	0	0
−1	0	1
0	0	0

FIG. 10B

0	−1	0
0	0	0
0	1	0

FIG. 11A

−1	0	1
−1	0	1
−1	0	1

FIG. 11B

−1	−1	−1
0	0	0
1	1	1

FIG. 12A

−1	0	1
−2	0	2
−1	0	1

FIG. 12B

−1	−2	−1
0	0	0
1	2	1

FIG. 13

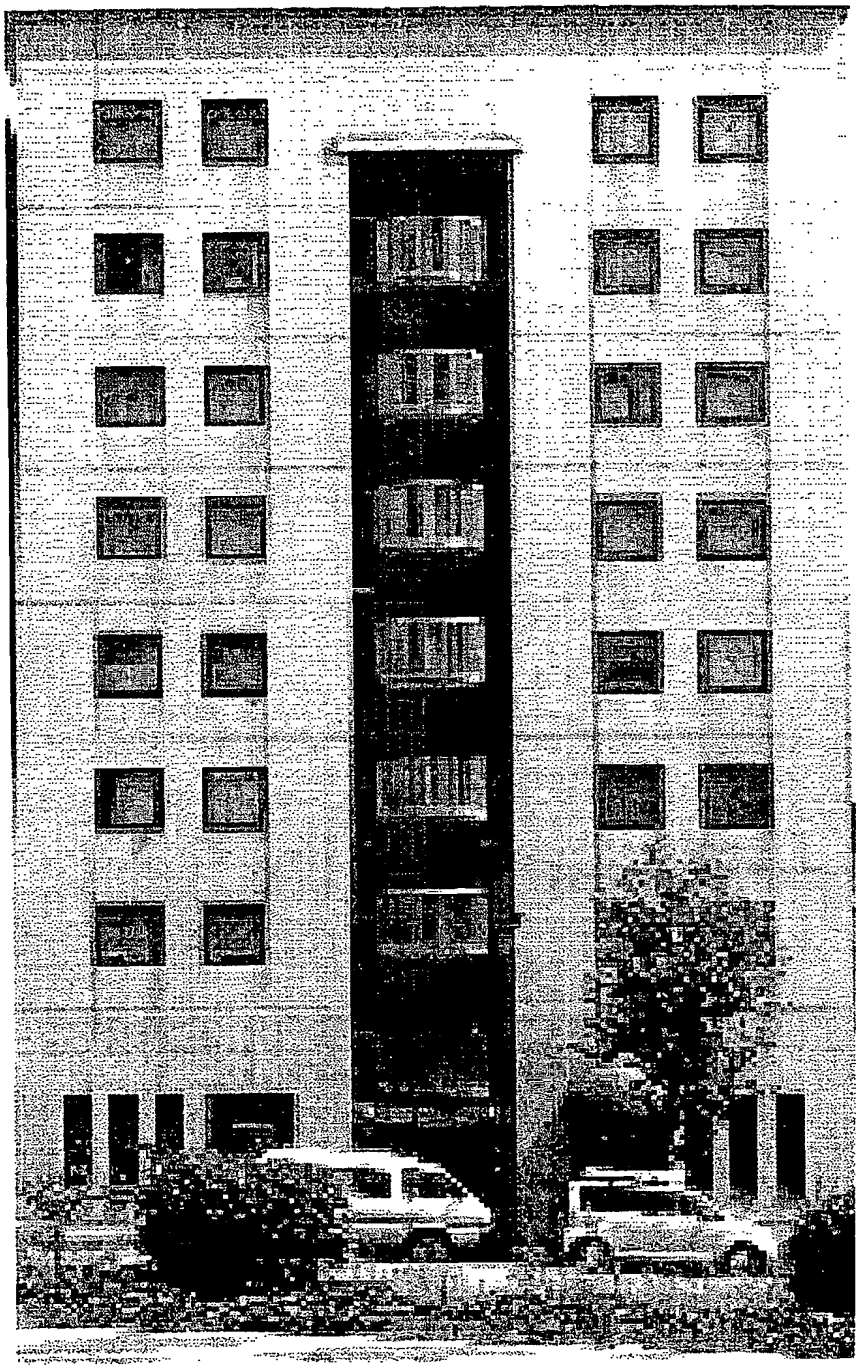


FIG. 14

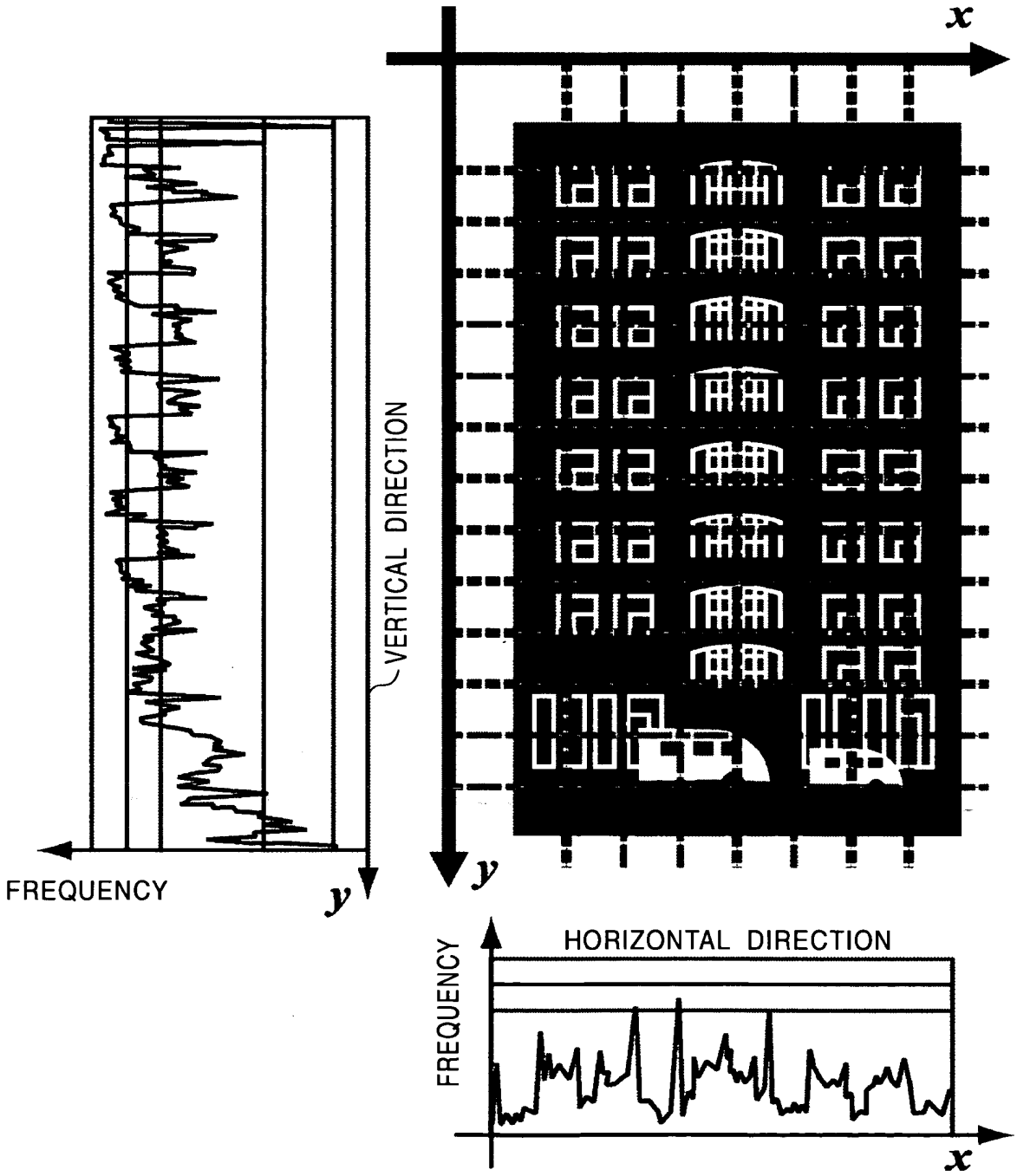

x
y
VERTICAL DIRECTION
FREQUENCY
y
HORIZONTAL DIRECTION
FREQUENCY
x

FIG. 15

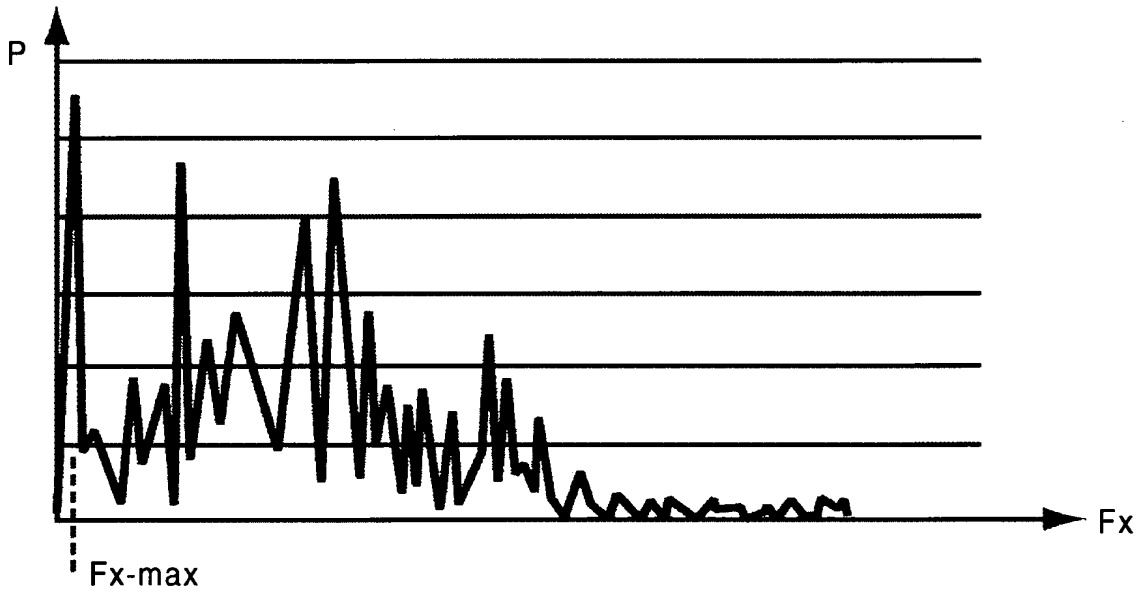


FIG. 16

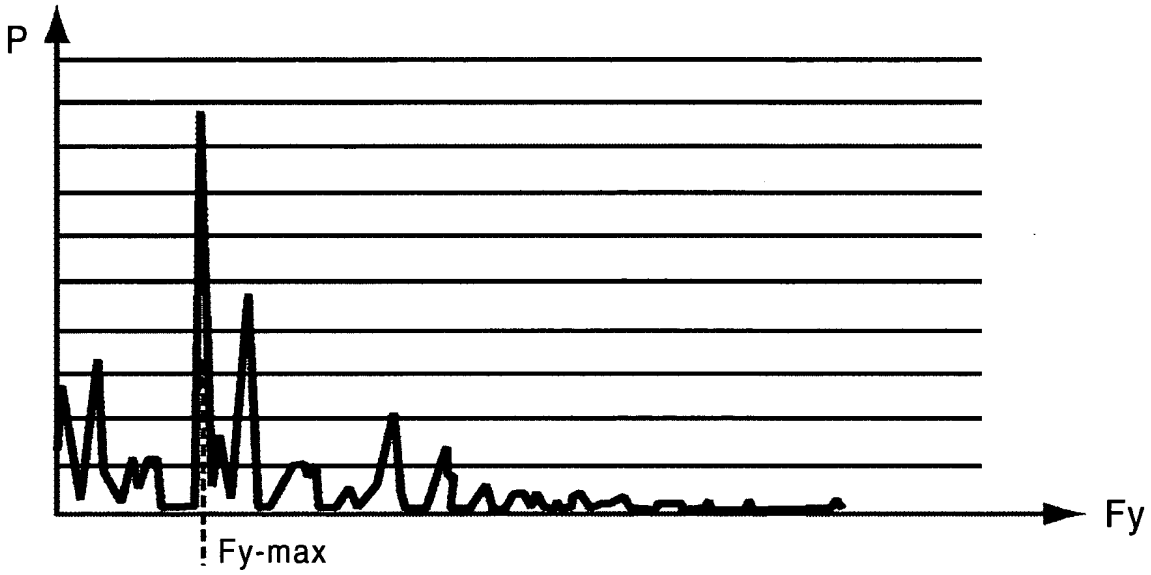


FIG. 17

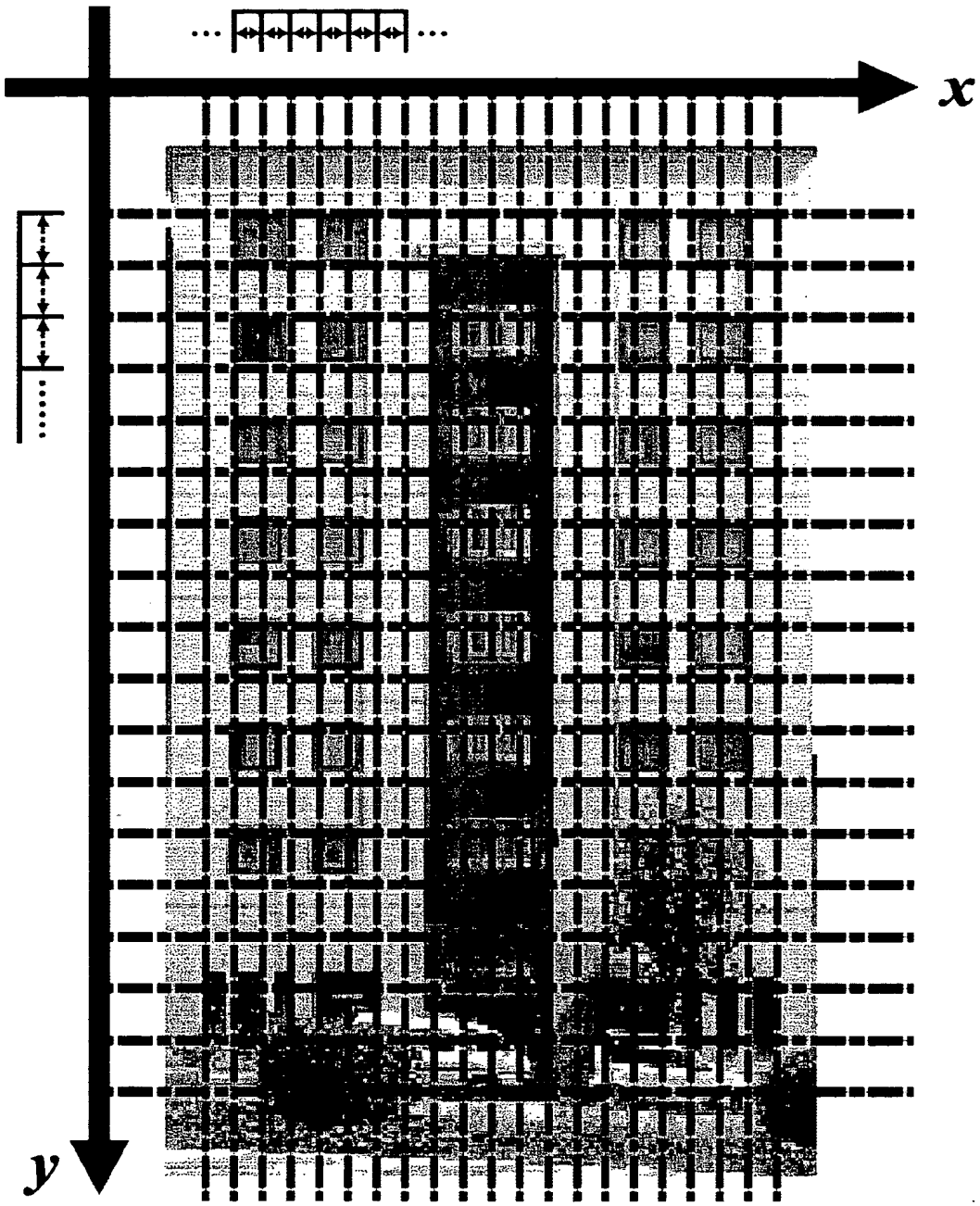


FIG. 18

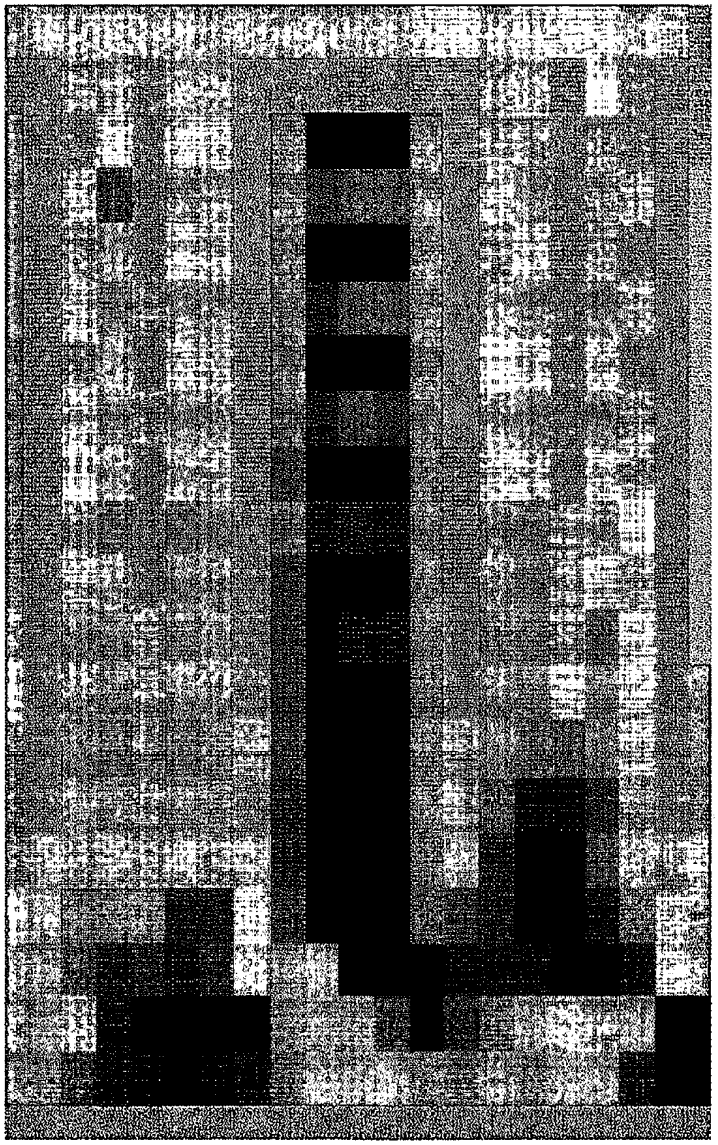
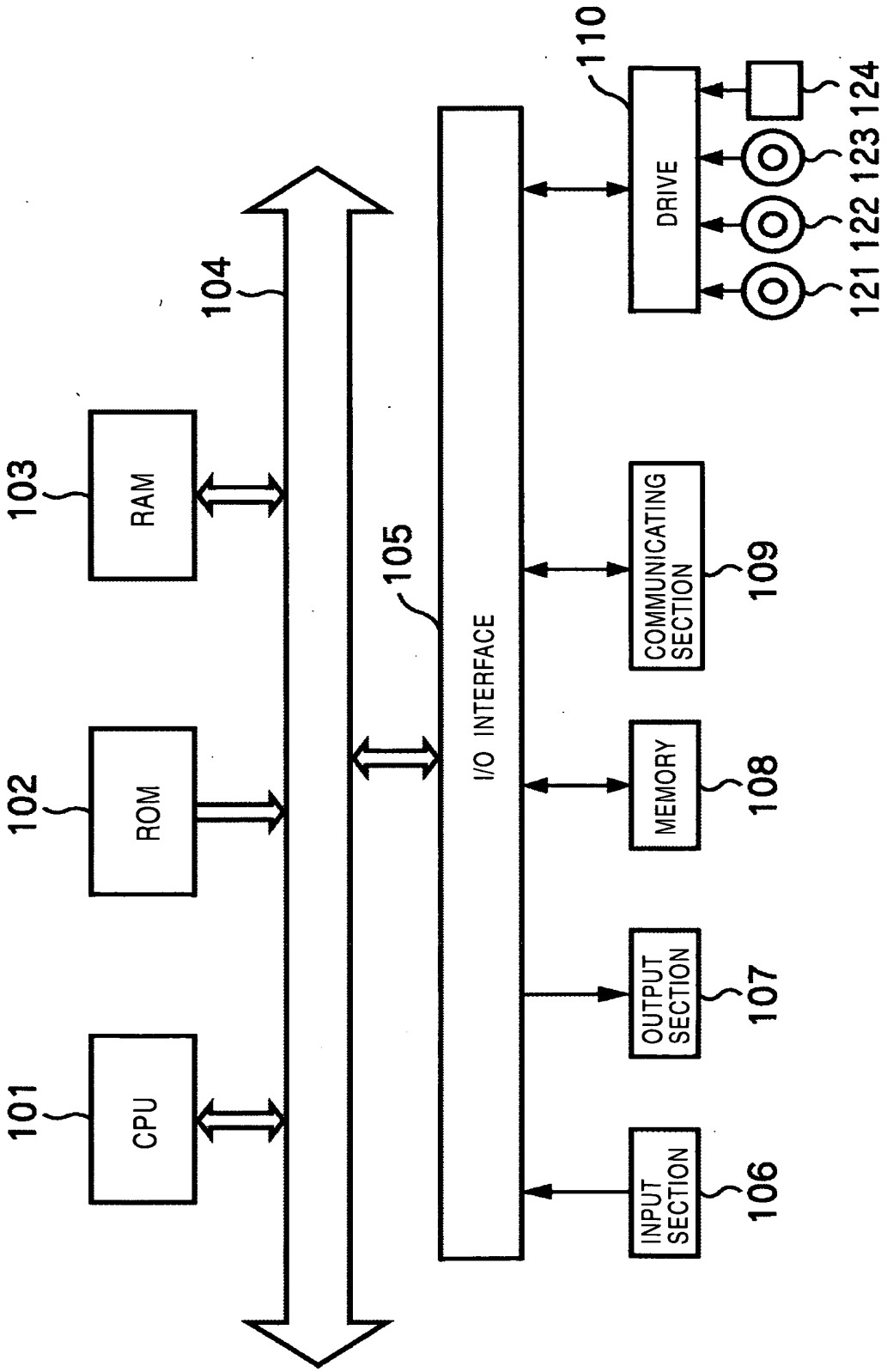


FIG. 19


101
CPU
102
ROM
103
RAM
104
105
I/O INTERFACE
106
INPUT SECTION
107
OUTPUT SECTION
108
MEMORY
109
COMMUNICATING SECTION
110
DRIVE
121 122 123 124